

# How the Pacific Northwest National Laboratory (PNNL) grew the Environmental Management System (EMS)

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Mike Moran  
Facility Energy Specialist  
[mike.moran@pnl.gov](mailto:mike.moran@pnl.gov)  
(509) 375-2344

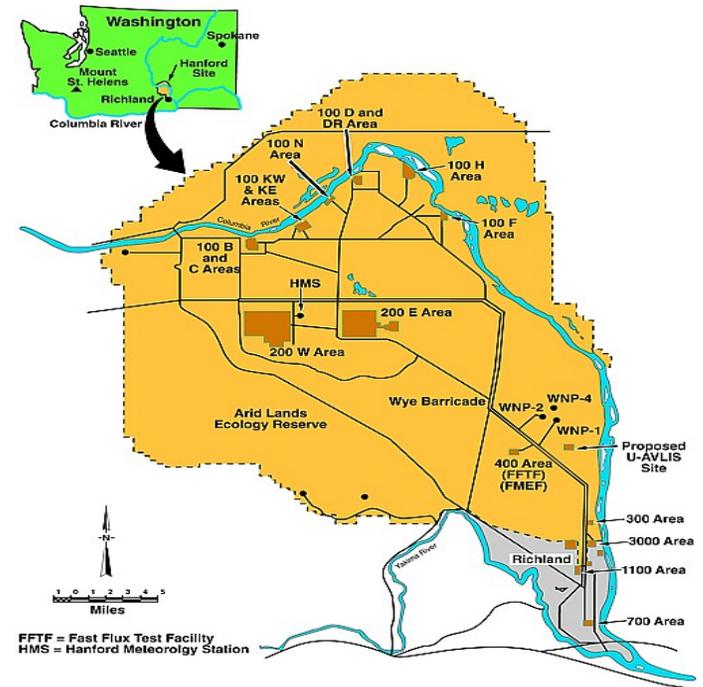
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# Outline

- ▶ PNNL introduction
- ▶ Barriers to integrating EO elements
- ▶ Our solution in progress
- ▶ Take-away message
- ▶ Questions

# Pacific Northwest National Laboratory (PNNL)

We are located in the South Central area of Washington State.



# Pacific Northwest National Laboratory



- \$760 million business volume
- >4,000 staff

# **PNNL's Strategy:** **Delivering science, technologies, and leadership to....**

Mission outcome

Examples

Strengthen U.S. scientific foundations for innovation

**Biomarkers to detect early-stage environmental and health problems**



Increase U.S. energy capacity and reduce dependence on imported oil

**Converting hydrocarbons to fuels**



Prevent and counter acts of terrorism and the proliferation of weapons of mass destruction

**Detecting nuclear and radiological materials at borders, ports**

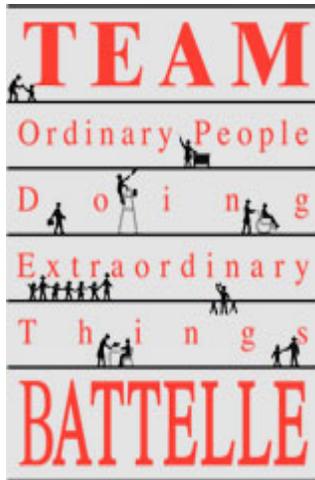


Reduce environmental effects of human activity and create sustainable systems

**Preventing and reducing contaminants in water supplies**



# Serving the Communities



- Battelle contributed more than \$1,097,000 in corporate funds to area philanthropic and civic organizations in fiscal year 2007.
- During the same period, staff from PNNL donated over 20,000 hours to community projects via the Team Battelle program.



# Status

- ▶ ISM since 1998
- ▶ VPP Star Status since 2001
- ▶ Registered to ISO 14001 since 2002
- ▶ Member of EPA National Environmental Performance Track since 2004
- ▶ Program Recognition
  - Department of Energy Pollution Prevention
  - Federal Energy Management Program Awards
  - Departmental Awards
  - Community and Industry Awards





**EPA Performance Track • ISO 14001**



# Elements of EO 13423

## ▶ 430.2B

- Energy Conservation
- Water Conservation
- Sustainable Design
- Fleet Vehicles

## ▶ 450.1A

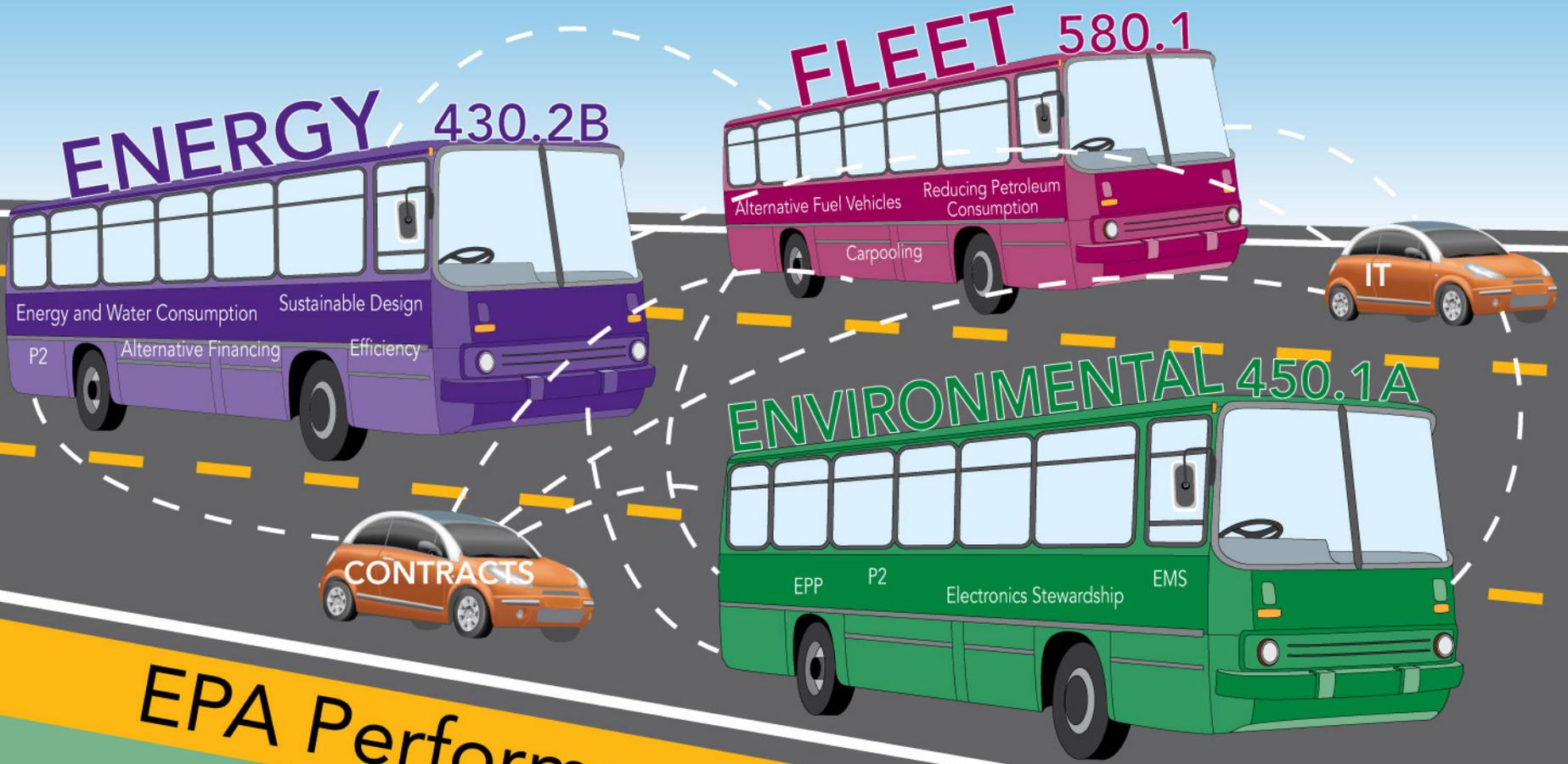
- Environmental Management Systems
- Environmentally Preferable Purchasing
- Pollution Prevention
- Electronics Management

EO Requires integration of individual organization

New requirements may be challenging to meet

More emphasis on utilization of Environmental Management System

# Elements of EO 13423



EPA Performance Track • ISO 14001



# Barriers Encountered

- ▶ No additional dollars
- ▶ Organizations are focused on actions within their own “vehicle”
  - Language barrier between vehicles
  - Requirements not formalized in contract
  - losing opportunities (leases)
- ▶ Timing - rules changed mid-stream (e.g. shredding of recycled paper due to security drivers)

# Solution in Progress

- ▶ Engaged with DOE-HQ, EFCOG, researchers
- ▶ Established cross-cutting EMS Core Team to:
  - Formalize key stakeholder relationships
  - Facilitate communication and identify opportunities for collaboration
  - Report single message to management and customer
- ▶ Approach:
  - Run like a project
  - Didn't reorganize

# PACIFIC NORTHWEST NATIONAL LABORATORY ENVIRONMENTAL MANAGEMENT SYSTEM



# PACIFIC NORTHWEST NATIONAL LABORATORY SUSTAINABLE OPERATIONS DASHBOARD

## ENVIRONMENTAL MANAGEMENT SYSTEMS

Environmental Management Systems

5.2.2

Compliance Management Plans

Reporting

## POLLUTION PREVENTION

Chemicals

5.3.3c, 5.3.3d

Recycling

5.3.3d

P2 Program/  
Recycling

5.3.3d

## ENERGY AND WATER CONSERVATION

Energy Efficiency

5.3.3a, 7.1.2

Greenhouse Gases

P2, 7.1.2

Renewable Power

5.3.3a, 7.1.2

Water Conservation

7.1.2

## SUSTAINABLE DESIGN

New Construction

5.3.3c, 7.1.2, 5.3.3d

Existing Capital Asset

7.1.2

Leased Facilities

7.1.2

## ACQUISITION & GREEN PRODUCT DESIGNATIONS

Environmentally Preferable Purchasing

5.3.3b, 6.2, 5.3.3d

Recycled Paper

5.3.3b, 5.3.3d

EPEAT Products

6.2, 5.3.3d

Operations of Facilities or Vehicles

Contracts, etc.

6.2

## FLEET VEHICLES

Fleet Vehicles

P2, 7.1.2, 6.2.3

Reduce Petroleum Products

P2, 7.1.2, 5.3.3c

Increase Alternative Fuel

P2, 7.1.2, 5.3.3d

## ELECTRONICS MANAGEMENT

Electronics Management

5.3.3d

# What Can You Do?

- ▶ Get involved (telecons, symposium, networks, pilot projects, EFCOG)
- ▶ Identify key contributors and create an EMS Core Team (reach across organization)
- ▶ Educate staff on value of EMS and how it can help them be successful (e.g., setting objectives and targets)
- ▶ Establish single EMS dashboard to identify all elements and assist in reporting and visualizing status

# Questions?

Mike Moran – Facility Energy Specialist  
Facility and Operations Directorate

[mike.moran@pnl.gov](mailto:mike.moran@pnl.gov)

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